

## FLAT PLATE SOLAR COLLECTORS

The SUNSYSTEM range of flat plate solar collectors provides variety of options for every application.



**S** Two grades of efficiency - Standard and Select

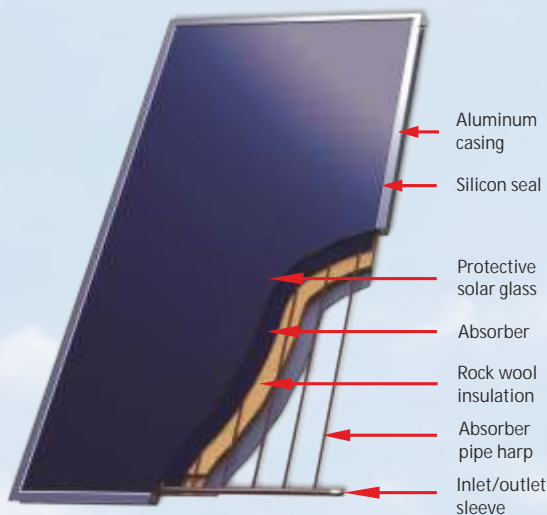
SUNSYSTEM Standard collectors are especially applicable for sites with seasonal consumption of hot water mainly during the warm part of the year. During the period April through October they satisfy the needs of hot water in a household at 80% - 100%.

SUNSYSTEM Select are highly efficient solar collectors appropriate for exploitation throughout all seasons.

**S** Two orientation variants: portrait and landscape

**S** Two connection options: ½" threaded sleeve or Ø22 sleeve for compression fitting

**S** Three sizes - 2.0m<sup>2</sup>, 2.15m<sup>2</sup>, 2.5m<sup>2</sup> and 2.7m<sup>2</sup>



### Product Features

The aluminum casing is designed to withstand the rough conditions of the outdoor environment and ensures long life of the product. The frame design provides for easy fixation and multiple mounting possibilities. It has aesthetic appearance and comes colored alternatively in RAL 9006 or RAL 9005.

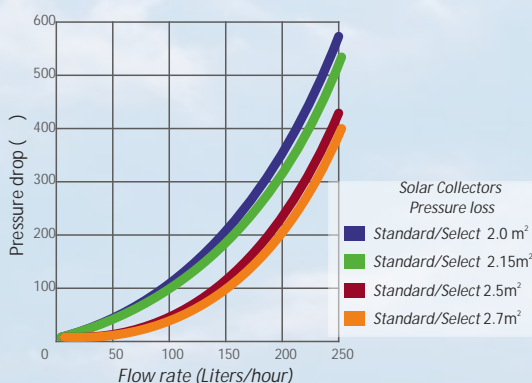
Rock wool insulation with excellent heat insulating capabilities keeps thermal loss at minimum even in harsh climate conditions.

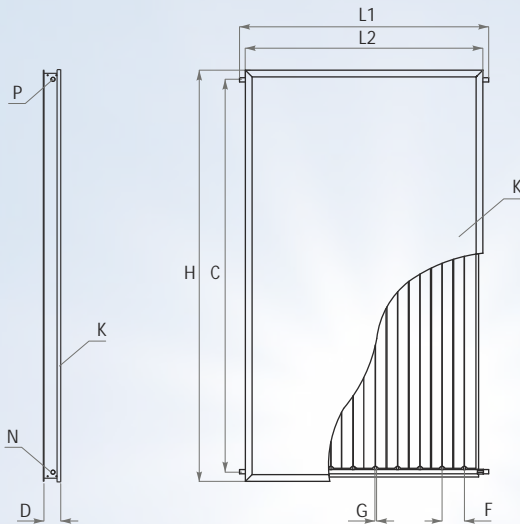
The absorber is made of coated copper elements to transfer the heat from the sun into the heat-carrier. The absorber coating type differs between the Standard and Select models: SUNSYSTEM Standard family employs black solar coating which is a cost-effective solution for sites with mild climate or seasonal hot water consumption mainly during the warm part of the year. SUNSYSTEM Select is distinguished by its highly selective sapphire-blue colored coating 'eta plus' which is a ceramic-metal compound applied on copper base. Due to its excellent absorbance rate of 95% and the minimal thermal emission of as much as 5% the SUNSYSTEM Select family is the best choice for a year-round solar thermal system.

The harp type absorber construction ensures low hydraulic resistance and economic energy consumption. Each unit is tested for liquid-tightness.

Protective solar glass Durasolar® P+ Due to its prismatic pattern it captures even the indirect sun rays and directs them straight onto the absorber. It lets the sun rays in and restricts their reflection out of the collector. Being a low-iron glass (FeO 0.02%) it has higher energy transmission rate than regular glass, with a solar energy transmission value T<sub>sol</sub>=90.7%. Durasolar® P+ is heat-tempered to withstand the strains of the open environment such as wind, snow and hail.

UV resistant silicon seal. Specially designed meander-profile sealing ensures tight fitting of the glass pane to the aluminum framework. Made of durable solar grade silicon.





Standard Black solar coating ½" male threaded sleeves	Select Selective coating "eta plus" ½" male threaded sleeves
Standard New Line Black solar coating Ø22 sleeves for compression-fitting assembly	Select New Line Selective coating "eta plus" Ø22 sleeves for compression-fitting assembly



	Sunsystem STANDARD		Sunsystem SELECT				
	P 2,15	P 2,7	P 2,0	P 2,15	P 2,5	P 2,7	
Overall dimensions	Width L1 mm	1000	1228	1000	1000	1228	1228
	Height H mm	2125	2125	2000	2125	2000	2125
	Thickness D mm	90	90	90	90	90	90
Collector case width L2 mm	1020	1248	1020	1020	1248	1248	
Distance b/n collecting pipes C mm	2025	2025	1900	2025	1900	2025	
Overall surface m <sup>2</sup>	2,15	2,7	2,0	2,15	2,45	2,7	
Absorber surface m <sup>2</sup>	1,94	2,41	1,8	1,94	2,29	2,41	
Volume of heat carrier Litter	1,6	2,0	1,4	1,6	1,8	2,0	
Test pressure Mpa	2,5	2,5	2,5	2,5	2,5	2,5	
Max. Operating pressure Mpa	0,6	0,6	0,6	0,6	0,6	0,6	
Inlet/Outlet N,P	R1/2"	R1/2"	R1/2"	R1/2"	R1/2"	R1/2"	
New Line Inlet/Outlet N,P	Cu ø22	Cu ø22	Cu ø22	Cu ø22	Cu ø22	Cu ø22	
Flow rate of heat carrier l/m <sup>2</sup> h	50	50	50	50	50	50	
Weight kg	33	38	31	33	36	38	
Thickness of solar glass mm	4,2	4,2	4,2	4,2	4,2	4,2	
Material of solar glass K	Heat tempered prismatic glass Durasolar P+						
Absorber pipes G	8	10	8	8	10	10	
Distance b/n absorber pipes F, mm	114	114	114	114	114	114	
Number of collecting pipes pcs	2	2	2	2	2	2	
Material of collector case	Powder coated Aluminium - RALL 9006						
Material of absorber	Copper						
Coating of absorber	Black solar coating		Selective coating				
Thermal loss coefficient - <sub>1</sub> W/m <sup>2</sup> K	6,18	6,18	3,83	3,83	4,23	4,23	
Thermal loss coefficient - <sub>2</sub> W/m <sup>2</sup> K <sup>2</sup>	0,0227	0,0227	0,0080	0,0080	0,0035	0,0035	
Insolation	Rock wool g=30kg/m <sup>3</sup> =40mm DIN 181165						
Heat carrier fluid	Propylene GlycolPG 50% (freezing point - 34°C)						
Stagnation temperature °C	170	170	200	200	200	200	

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